Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 10:51 AM
To: Jackson, Susank
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

Yes we have the temperature data, it would take some time to look at it though. I am home today - freezing rain yuck.

Yesterday the joint committees have placed a proposal for further discussion on Tuesday. 8% imperviousness cap for the new developments in Ten Mile Creek. That is a reduction from the original 25, 25, and for LSTM110 10%. That is a huge move in the right direction.

Keith

-----Original Message-----
From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Wed 2/5/2014 9:41 AM
To: Van Ness, Keith
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: Meeting Update Fact Sheet-edit re temp and restoration of native fish

I have revised the meeting summary 'fact sheet' to address comment from Scot asking about temp data in regards to reintroduction of brook trout. Keith - is there existing temp data that indicate, or not, the temp regime necessary to support re-introduction? I have edited the fact sheet to indicate temp regime is a consideration in re-introduction.

The reason I am asking this is because I have received a specific question on this from a citizen who wants to talk with Berliner.

Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 10:52 AM
To: Jackson, Susank
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

Susan - I am at home - freezing rain and lots of down tree limbs. I would suggest that you refer folks to DEP with questions rather then putting me down. That way, they will get a prompt response if I am not around. If the person does that, it gets routed to me or my boss and a record is made of the request. They can contact askdep.com Thanks Keith

-----Original Message-----
From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Wed 2/5/2014 10:02 AM
To: Van Ness, Keith
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

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Is there a time I could talk with you today? I would like to send you the fact sheet and then refer councilman Ehrlich and public with questions to you to obtain the meeting update.

Susan

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Susan

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From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 10:55 AM
To: Stranko, Scott; Jackson, Susank
Cc: Pond, Greg; Gerritsen, Jeroen; Reynolds, Louis; Klauda, Ron
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

Good luck with the power situation Scott. I am home as well - lots of down branches.

-----Original Message-----
From: Stranko, Scott [mailto:SSTRANKO@dnr.state.md.us]
Sent: Wed 2/5/2014 10:20 AM
To: 'Jackson, Susank'; Van Ness, Keith
Cc: Pond, Greg; Gerritsen, Jeroen; Reynolds, Louis; Klauda, Ron
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

Hi Susan,

If the fact sheet is the file you attached to the email sent at 9:41, it looks good. I attached it to this email too. You can definitely call me [redacted] I may be leaving work early because my wife called and said the power is out at our house. I don't know for sure what you mean by "refer councilman Ehrlich and public with questions to you to obtain the meeting update". Can you please give me some clarification and detail? I was not at the meeting...

Thanks,

Scott

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Wednesday, February 05, 2014 10:03 AM
To: Van Ness, Keith
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

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Susan

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Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
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Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 11:52 AM
To: Jackson, Susank; Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

For the BCG work, please refer folks to me - I'm sorry misunderstood. Too many down trees, too little time.

-----Original Message-----
From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Wed 2/5/2014 11:16 AM
To: Van Ness, Keith; Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
Subject: RE: Meeting Update Fact Sheet-edit re temp and restoration of native fish

I added the following FAQ:

What is status of model development?
Draft narrative decision rules derived at the second expert meeting have been independently reviewed and tested by the experts. The rules are currently be revised to reflect the expert comments and results will be shared with the expert workgroup. Further work is planned to develop numeric decision rules and algorithm to quantify the model.

Keith - we did this work for the county so that is who I would refer folks to. if not you, I will refer folks to Mary.

Susan

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 10:51 AM
To: Jackson, Susank
Cc: Pond, Greg; Stranko, Scott; Gerritsen, Jeroen; Reynolds, Louis
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Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 6:39 PM
To: Pond, Greg; Jackson, Susank; Gerritsen, Jeroen
Cc: [redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Let me check on imperviousness from Ten Mile analysis.

-----Original Message-----
From: Pond, Greg [mailto:Pond.Greg@epa.gov]
Sent: Wed 2/5/2014 6:32 PM
To: Jackson, Susank; Van Ness, Keith; Gerritsen, Jeroen
[redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Ok, here is the edited fact sheet. First, on the colorful figure, I adjusted the TMC sites on the gradient, and the % IC (an approximation) scale on the x-axis, to better represent the data.

%IC was a tiny bit different on 2 datasets I had from MoCo, but no biggie, I reconciled with the last file sent to me. On Figure 2 scatterplots, site 303b (4.13%) and 304 (4.07) overlapped and so I jittered them a bit so they were observable. I also noticed I had 2 different (years) LSTM110, and so only used 1 in this edited version. I changed the text to reflect 4-15% not 7-12%.

Let me know if you have any Qs.

Greg Pond
U.S. EPA Region III
Office of Monitoring and Assessment
Freshwater Biology Laboratory
1060 Chapline St.
Wheeling, WV 26003
Ph: 304-234-0243
pond.greg@epa.gov

From: Pond, Greg
Sent: Wednesday, February 05, 2014 4:58 PM
To: Jackson, Susank; Van Ness, Keith; Gerritsen, Jeroen
[redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Hi Susan. Seems to be a slight mismatch in the data in the upper vs. lower graphs. I will double check these tonight.

Greg Pond
U.S. EPA Region III
Office of Monitoring and Assessment
Freshwater Biology Laboratory

1060 Chapline St.
Wheeling, WV 26003
Ph: 304-234-0243
pond.greg@epa.gov<mailto:pond.greg@epa.gov>

From: Jackson, Susank
Sent: Wednesday, February 05, 2014 4:27 PM
To: Van Ness, Keith; Gerritsen, Jeroen; Pond, Greg
[redacted]
Subject: Question about % impervious surface for sites LSTM 303, 304, and 202

See highlighted text - did I pull the % off correctly from the graph? Want to confirm graph is approximately correct.

Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Thursday, February 06, 2014 8:51 AM
To: Matthew Baker
Cc: Jackson, Susank
Subject: RE: Re: Recent Publication from the Clarksburg SPA collaborators

Hi Matt:
If you go through the powerpoint to scenario 3, you will see the areas being discussed. DEP applied all the existing environmental buffers and protections in the county's toolbox – scenario 3 was the preferred one. The field area in the south is the one proposed for the higher development and the field area to the north is the one proposed for less imperviousness.

https://dl.dropboxusercontent.com/u/74017608/Miles%20Coppola_29Jan14.pdf

Hope this helps.
Keith

From: Matthew Baker [mailto:mbaker@umbc.edu]
Sent: Wednesday, February 05, 2014 10:32 PM
To: Van Ness, Keith
Cc: Jackson, Susank
Subject: Fwd: Re: Recent Publication from the Clarksburg SPA collaborators

Keith

See the message below. Would it be too much to ask for a map of what Marc is asking about? I do not have a copy of the master plan handy so I am somewhat at a loss about how to interpret the trade-offs being proposed.

Matt

-------- Original Message --------
Subject: Re: Recent Publication from the Clarksburg SPA collaborators
Date: Wed, 5 Feb 2014 19:23:33 -0800 (PST)
From:marc <marcx@yahoo.com>
To: Matthew Baker <mbaker@umbc.edu>
CC: Jackson.Susank@epa.gov

Matthew,
Thank you for your earlier letter and this recently published paper. They are very, very helpful.

I thought you made a strong case for holding imperviousness on new development to 6% or less in the most sensitive watersheds, 110 and 111 In contrast to these sheds, the sub-watershed at the top nearest the headwaters, 206, is already at 16% imperviousness and that stream seems to be seriously compromised as it is. We received an opinion from some of our DEP staff that because of that, this sub-watershed would be less sensitive, or at least less harmed by additional imperviousness above 6%. Staff identified two sites, one nearest Rte 121 that is 5.5 acres and an interior site of a little more than

18 acres where the two fields are, toward the north of property, and where they said somewhat less than half the field (that part above the steep and erodible slopes) and including a portion of existing forest could receive additional development. They supported a recommendation of relatively dense development, consistent with town center, on the smaller
site, and a RNC zone (rural cluster) on the interior site. Overall, they would allow 15% imperviousness on the Miles-Copolla site and 15% on the Egan site. In terms of acres, since both Egan and Miles are each about 100 acres, that amounts to an additional 15 acres of imperviousness on each and we'd expect that the 5.5 acre site on Miles would be almost totally impervious leaving maybe ten acres on that interior area. Overall the sub-watershed 206 would go to a little more than 21% imperviousness at this level of development.

So, would allowing 15% on these two properties and bringing that sub-watershed to 21% imperviousness be likely to cause grievous harm to both the immediate area and stream as a whole. The Miles property has actually no imperviousness on it now. We seem to have acceptance that it is legitimate to differentiate permitted imperviousness levels based on the conditions of individual sub-watersheds and the question is, at what point does what we allow on 206 cause such harm to the stream that even maintaining "good" quality is not likely to happen. Our original proposal was 8-8-8 for the three properties and I think there's now there's a chance that 110 and 111 might go to 6 to protect it's fragility and we're being asked if there's more latitude than 8 on 206. Is there any reasonable latitude, or is 8 the proper number.

For reference the proposed 8-8-8 solution yields about 60 acres of new imperviousness, 6-8-8 yields 49 acres of imperviousness, and 6-15-15 yields about 63 acres of imperiousness. The big difference is that 6% on the Pulte properties, 110, 111 and part of another, adds 33 acres of imperviousness, compared to 43 acres at 8%. On Egan and Miles which sit on 206 (and Miles on part of a second one), they would go from 8 acres on each to 15 acres on each.

Thanks in advance for your thoughts,
Marc

On Tue, 2/4/14, Matthew Baker <mbaker@umbc.edu> wrote:

Subject: Recent Publication from the Clarksburg SPA collaborators
To: "marc" <marcx@yahoo.com>
Cc: Jackson.Susank@epa.gov
Date: Tuesday, February 4, 2014, 2:30 PM

FYI, published this week.

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Thursday, February 06, 2014 9:01 AM
To: Matthew Baker
Cc: Jackson, Susank
Subject: RE: Recent Publication from the Clarksburg SPA collaborators

Hi Matt:
I strongly recommend sending them just to Marc. He sent the email from his private email account. Then – delete the message on your sent folder!
Keith

From: Matthew Baker [mailto:mbaker@umbc.edu]
Sent: Thursday, February 06, 2014 8:57 AM
To: Van Ness, Keith
Cc: Jackson, Susank
Subject: Re: Recent Publication from the Clarksburg SPA collaborators

Thanks Keith. I'll try to get a response back to Marc today. Are my responses going to the entire council or just to Marc? Should I send them to other members as well?

Matt

On 2/6/14 8:51 AM, Van Ness, Keith wrote:

> Hi Matt:
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From: marc <marcx@yahoo.com>
To: Matthew Baker <mbaker@umbc.edu>
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From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Thursday, February 06, 2014 9:19 AM
To: Jackson, Susank
Subject: RE: Recent Publication from the Clarksburg SPA collaborators

Susan
No, would you please resend it at your convenience.
Thanks
Keith

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 9:09 AM
To: Van Ness, Keith
Subject: RE: Recent Publication from the Clarksburg SPA collaborators

Keith, did you see my email I sent earlier this morning - re the meeting update and % imperviousness associated with sites plotted on the BCG figure?

Susan

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From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Thursday, February 06, 2014 2:04 PM
To: Jackson, Susank; Pond, Greg; Gerritsen, Jeroen
Cc: [redacted]
Subject: RE: ALSO re: Question about % impervious surface for sites LSTM 303, 304, and 202
Attachments: imperv_area.xlsx

Susan et al

Here is the imperviousness numbers and a reference. Sorry for the delay.

Keith

-----Original Message-----
From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 12:53 PM
To: Jackson, Susank; Van Ness, Keith; Pond, Greg; Gerritsen, Jeroen
[redacted]
Subject: ALSO re: Question about % impervious surface for sites LSTM 303, 304, and 202

Also, just realized I did not explain but the slide I am working on re Greg's changes is slide #10 in attachment. This is the slide that shows the placement of TMC and other sites along the BCG

-----Original Message-----
From: Jackson, Susank
Sent: Thursday, February 06, 2014 8:09 AM
To: Van Ness, Keith; Pond, Greg; Gerritsen, Jeroen
[redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Greg,

I looked at the "jiggering" to the graph and think it is better to keep the high quality sites overlapping as they were if that reflects the BCG level assignments by the experts. I adjusted the impervious % - but request that for each site listed.

Greg or Keith: can you provide the BCG level assigned by the expert group and the % impervious surface associated with each site. I added a caveat to the figure and text noting that the degradation curve can reflect confounding and synergistic effects of other stressors.

Because of the focus on the % imperviousness, making sure we get this right is critical, including providing context for understanding the
uncertainty around these estimates. I am concerned about the graph in
that it tells a big picture story re impacts of development, especially related to impervious surface, but not appropriate to draw lines re what level of imperviousness allows for protection of good conditions. The % imperviousness between 303B/304 and LSTM 202 goes from 4% and 15%. This info could be over interpreted as a need for a cut off at 4% or that you can still have decent community at 15%.

In a response to a question from Councilman Ehrlich, Matt Baker provided a thoughtful response that included discussion about additional stressors and long term impacts of development regardless of later restoration effects.

Susan

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, February 05, 2014 6:39 PM
To: Pond, Greg; Jackson, Susank; Gerritsen, Jeroen
[redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

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Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Ok, here is the edited fact sheet. First, on the colorful figure, I adjusted the TMC sites on the gradient, and the % IC (an approximation) scale on the x-axis, to better represent the data.

%IC was a tiny bit different on 2 datasets I had from MoCo, but no biggie, I reconciled with the last file sent to me. On Figure 2 scatterplots, site 303b (4.13%) and 304 (4.07) overlapped and so I jittered them a bit so they were observable. I also noticed I had 2 different (years) LSTM110, and so only used 1 in this edited version. I changed the text to reflect 4-15% not 7-12%.

Let me know if you have any Qs.

Greg Pond
U.S. EPA Region III
Office of Monitoring and Assessment
Freshwater Biology Laboratory
1060 Chapline St.
Wheeling, WV 26003
Ph: 304-234-0243
pond.greg@epa.gov

From: Pond, Greg
Sent: Wednesday, February 05, 2014 4:58 PM
To: Jackson, Susank; Van Ness, Keith; Gerritsen, Jeroen
[redacted]
Subject: RE: Question about % impervious surface for sites LSTM 303, 304, and 202

Hi Susan. Seems to be a slight mismatch in the data in the upper vs.
lower graphs. I will double check these tonight.

Greg Pond

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From: Jackson, Susank
Sent: Wednesday, February 05, 2014 4:27 PM
To: Van Ness, Keith; Gerritsen, Jeroen; Pond, Greg
[redacted]
Subject: Question about % impervious surface for sites LSTM 303, 304, and 202

See highlighted text - did I pull the % off correctly from the graph?
Want to confirm graph is approximately correct.

Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 8:16 AM
To: Jackson, Susank
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary

This is cleaner and the title of the file is much better. May I save it as a .pdf before sending it to people if they request it?

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 6:10 PM
To: Van Ness, Keith
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary

Attached is cleaner titled copy – same text though

Susan

From: Jackson, Susank
Sent: Thursday, February 06, 2014 4:32 PM
To: Van Ness, Keith
Cc: Dolan, Mary; 'Symborski, Mark'; Pond, Greg
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From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 8:26 AM
To: Pond, Greg; Jackson, Susank
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: RE: Update on BCG model development_summary

Thanks Greg – I do think the link to imperviousness is made. One topic hot around the coffee pot now is whether the new environmental site design requirements will offset the previously documented imperviousness limits. Some are arguing that it will and that the old limits are no longer relevant as linked to biological integrity. Others are taking a view that there is no data to support that hypothesis. I think this paper is very strong, well documented and science based. Kudos!
Keith

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Sent: Friday, February 07, 2014 8:19 AM
To: Van Ness, Keith; Jackson, Susank
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: RE: Update on BCG model development_summary

Much better. Yes I agree too to take out the IC on the conceptual BCG graph—it's not exactly tied to the actual data distribution. But it kinda takes the communication out of the communication tool, I think.

Keith, I think saving as a pdf is best.

Good luck!

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From: Van Ness, Keith [mailto:Keith.VanNess@montgomerycountymd.gov]
Sent: Friday, February 07, 2014 8:12 AM
To: Jackson, Susank; Pond, Greg
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: RE: Update on BCG model development_summary

Thanks to all – yes the solution Jeroen recommended is very good. I will save this copy and send out when requested. Also – I will share it with my managers if that is ok with you all.
Thanks
Keith

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 4:42 PM
To: Pond, Greg; Van Ness, Keith
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: FW: Update on BCG model development_summary

FYI – I talked with Jeroen to see if he had the tables for the BCG tier assignments and corresponding % impervious surface. I explained my dilemma over showing the % impervious surface for each of the sites in Figure 1. As mentioned earlier, I was concerned about the % impervious surface numbers being used out of context since the focus seems to be on setting 6% or other % limits. The gap between one site at lower 3range at 4% impervious and then the jump to a 4+ site at 11% impervious could be over interpreted in two ways: first, there is a hell of a drop off between 4% and 11% so need to set limit at 4% OR hey, not too much of a difference between 4% and 11%, so 11% should be fine. I have seen limited data stretched way beyond what it should be.

Jeroen was spot on – he remarked: this is a conceptual graph, shows the big picture – take the impervious surface % out. Figure 2 tells you want you need to know.

And that is what I did.

And that is the end of the story.

Thank you Jeroen. I was too close to see the simple solution. I did include the % imperviousness in the text though. That seemed ok.

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US EPA biocriteria program

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Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 9:04 AM
To: Pond, Greg; Jackson, Susank
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: RE: Update on BCG model development_summary

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Greg:

One step forward and two steps back – when people talk about minimizing environmental damage using BMPs, it seems there is an implicit recognition that damage will occur and is acceptable. Mountaintop removal must dwarf the environmental damage we work with here. I do not envy you my friend!
Keith

From: Pond, Greg [mailto:Pond.Greg@epa.gov]
Sent: Friday, February 07, 2014 8:31 AM
To: Van Ness, Keith; Jackson, Susank
Cc: Gerritsen, Jeroen; Matthew Baker; Stranko, Scott
Subject: RE: Update on BCG model development_summary

Yes kudos to all. I forwarded to Frank, Lou and Maggie in our shop. You are right that there will be 2 schools of thought on these new BMPs. Right now, we are going through the exact same 2-sided coin arguments on mountaintop removal and "BMPs" to minimize damages.

Greg Pond
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Office of Monitoring and Assessment
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Wheeling, WV 26003
Ph: 304-234-0243
pond.greg@epa.gov

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Susan Jackson
US EPA biocriteria program

Greg Pond
US EPA Region 3

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 9:06 AM
To: Dolan, Mary; Jackson, Susank
Cc: Symborski, Mark
Subject: RE: Native Trout Re-introduction in Ten Mile Creek

I remember that effort! Jorge asked for all our water temperature data at the time. No luck that time. There are new Class III criteria now so maybe they can be applied.

From: Dolan, Mary [mailto:mary.dolan@montgomeryplanning.org]
Sent: Friday, February 07, 2014 8:36 AM
To: Jackson, Susank
Cc: Van Ness, Keith; Symborski, Mark
Subject: RE: Native Trout Re-introduction in Ten Mile Creek

Susan-

After the 1994 Clarksburg master plan was adopted, we asked DNR to evaluate Ten Mile Creek to see if it could be reclassified as a Use IV stream, suitable for put and take trout, and they did not reclassify it at that time. Keith may have additional information.

Mary

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 5:59 PM
To: tenley.wurglitz@gmail.com
Cc: Van Ness, Keith; Symborski, Mark; Dolan, Mary
Subject: RE: Native Trout Re-introduction in Ten Mile Creek

Hello Tenley,

I apologize for delay in response. I have been out of town and in back to back meetings since January 17 --- and am very behind in responding to emails.

Per your inquiry, yes, I did report to the council that, based on the preliminary findings and perspectives from the experts working on development of the Northern Piedmont Biological Condition Gradient, there are streams in the Ten Mile Creek shed that are potentially suitable for re-introduction of self-reproducing populations of native trout. I inquired further with Scott Stranko of Maryland DNR about this and he said that one of the key criteria to consider is whether the appropriate temperature regime present (e.g. is the stream temperature regime cold or cool enough). I do not have the temperature data but you could inquire with Keith Van Ness.

Also, I just sent to Keith with a cc to Mary Dolan and Mark Symborski an updated 3-pager summarizing the status and preliminary findings of the expert workgroup working on BCG model development for the Northern Piedmont. The summary may provide some useful information on the BCG project. If so, please inquire with Keith, Mary or Mark for a copy of the February 6 update – their emails are in the cc box.

If you are interested in further information about the biological criteria program and BCG model development, attached is an article from Ecoapplications that reported on the model as developed by a national workshop and URLs for some of our documents.

1) Biological assessment fact sheet on terms and definitions:
http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/biocriteria/upload/primer_factsheet.pdf

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If you have further questions on the biological criteria program or the BCG model, please feel free to contact me. I promise I will be more prompt in responding to your inquiry.

Susan Jackson
US EPA biological criteria program

From: Tenley Wurglitz [mailto:tenley.wurglitz@gmail.com]
Sent: Wednesday, January 29, 2014 6:11 PM
To: Jackson, Susank
Subject: Native Trout Re-introduction in Ten Mile Creek

Dear Ms. Jackson,

I really enjoyed meeting you after the Montgomery County Council work session a couple weeks ago and learning a bit about the Biological Condition Gradient model that you and your colleagues are developing.

Thank you for your important testimony at the work session. I can't remember if you mentioned in your statement (my apologies if you did and I missed it), but I wanted to urge you to let the Councilmembers know that Ten Mile Creek (in its current condition) is suitable for native brook trout reintroduction. I think this is a significant fact that they should be aware of. Councilmember Roger Berliner has publicly expressed his love of fly fishing on at least two recent occasions and I think he would be particularly interested.

Thank you again for your testimony. I couldn't agree more that Ten Mile Creek is a treasure!

Best wishes,
Tenley

Tenley Elizabeth Wurglitz
tenley.wurglitz@gmail.com
202-362-2308

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 9:52 AM
To: Jackson, Susank; Stranko, Scott
Cc: Pond, Greg
Subject: RE: Native Trout Re-introduction in Ten Mile Creek

Hi All:

I agree – Class III criteria now include the presence of Sweltza sp. and/or Tallaperla sp. – they may show up in benthic samples from the headwater streams in Ten Mile Creek. Three other streams in the County have already been added to the proposed list of Class III streams based on their presence.

See Greg – benthic macroinvertebrates are important for other then fish chow!

Yes – we will be delving into the temperature data - focusing on the headwaters.

Keith

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Friday, February 07, 2014 9:39 AM
To: Stranko, Scott
Cc: Pond, Greg; Van Ness, Keith
Subject: FW: Native Trout Re-introduction in Ten Mile Creek

Any data on stream temp for Ten Mile Creek?

Put and take is obviously not the same as self-sustaining, reproducing populations.

Susan

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
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Cc: Symborski, Mark
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Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary
Attachments: Piedmont_BCG_Expert_Meeting_Update_for_MoCo_Feb_6.pdf

Hi All
Attached is the pdf of the report. Thank you so much Susan and everyone!

Please note that I made one change – I changed the name of Hoyt Creek (my Directors last name) to its proper name – Croyden Run. It was noticed (ahem) and brought to my attention.
Thanks
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Expert Meeting Update: Condition Assessment of Ten Mile Creek Watershed Streams (2/6/14 update)

In March 2013, Montgomery County convened a panel of 17 scientists with expertise in stream ecology, benthic macroinvertebrate (e.g. insects, crayfish, mussels, snails, and worms) and fish community assessments. The experts attending the meeting included scientists from Montgomery County, the State of Maryland, the University of Maryland, University of Maryland at Baltimore County, the Interstate Commission Potomac River Basin and U.S. EPA. The purpose of this meeting was to develop and test a preliminary model for assessment and interpretation of the biological condition of streams within the Ten Mile Creek (TMC) Watershed (Northern Piedmont Ecological Region). A preliminary model was developed using taxonomic data provided by the county and the Maryland Biological Streams Survey (MBSS). The model, Northern Piedmont Biological Condition Gradient, provides a framework for assessing current stream condition relative to natural, undisturbed conditions and identifying goals for protection of high quality streams and restoration of degraded streams (US EPA 810-R-11-01).

On September 24 – 26, 2013 Montgomery County convened a second expert meeting with a larger number of sites for analysis and with an expanded group of experts, including scientists from the states of Virginia, Pennsylvania and Delaware. A more robust, in-depth analysis of the sites is necessary to refine the model and develop an approach for quantification of the model. The preliminary findings of both expert meetings were comparable:

- Four of the 11 TMC monitoring stations were used in the development of the model. One headwater site within the TMC Watershed (King Spring-LSTM110) was identified as a high quality stream (Tier 2-) with taxa comparable to State of Maryland Sentinel Sites (Figure 1). Impervious cover for these sites was at 3% or below. Three other TMC sites with impervious cover ranging between 4 and 11% were rated between Tier 3 and Tier 4 (lower condition). The sites that were approaching BCG level 4 were informally characterized as "just hanging on" to what may be considered an acceptable level of condition. These sites are potential candidates for cost effective restoration.

- Sites within TMC Watershed having higher levels of impervious surface were assessed as lower quality. These more degraded sites had elevated levels of specific conductance, an indicator of urban runoff. However, tributaries (like King Spring) serve to dilute specific conductance in the lower mainstem TMC.

- Sites within the Piedmont with levels of impervious surface typically higher than 4% showed increasingly degraded aquatic communities. Figure 2 shows average benthic tier assignment and % sensitive species plotted against % impervious surface. Increase level of impacts can also be caused by confounding and synergistic effects of other stressors.

- Across Montgomery County both fish and benthic macroinvertebrate assemblages are assessed. Invertebrates serve critical roles in stream ecosystem functioning in addition to providing food and energy to downstream vertebrate consumers such as fish and salamanders. In some instances, the experts tended to assign lower ratings for the fish community; this was generally attributed to prevention of native fish migration due to dams and other obstacles. Additionally, there was evidence of intrusion of lake fish species from reservoirs. However, there was sufficient fish habitat and food supply (the benthic macroinvertebrates) to support re-introduction of native species such as brooks trout or migration of other species such as eel. Depending upon existing temperature regimes, these sites may be excellent sites for re-introduction of native and migratory species.

Draft decision rules to consistently quantify the site assessments were developed and considered by experts to be applicable to the larger Piedmont region. The experts, including the Maryland, Virginia, Pennsylvania and Delaware state experts, agreed to collaborate in development of decision rules and an algorithm for model quantification. Analysis of new sites and testing of decision rules by the experts will be conducted over next few months. Some of the experts will further evaluate the relationship between flow, proposed stream BMPs and predicted biological impacts as it relates to their current research. The biological condition gradient model can be used to supplement the Montgomery County IBI to more precisely identify high quality conditions for protection and to establish incremental goals for restoration.

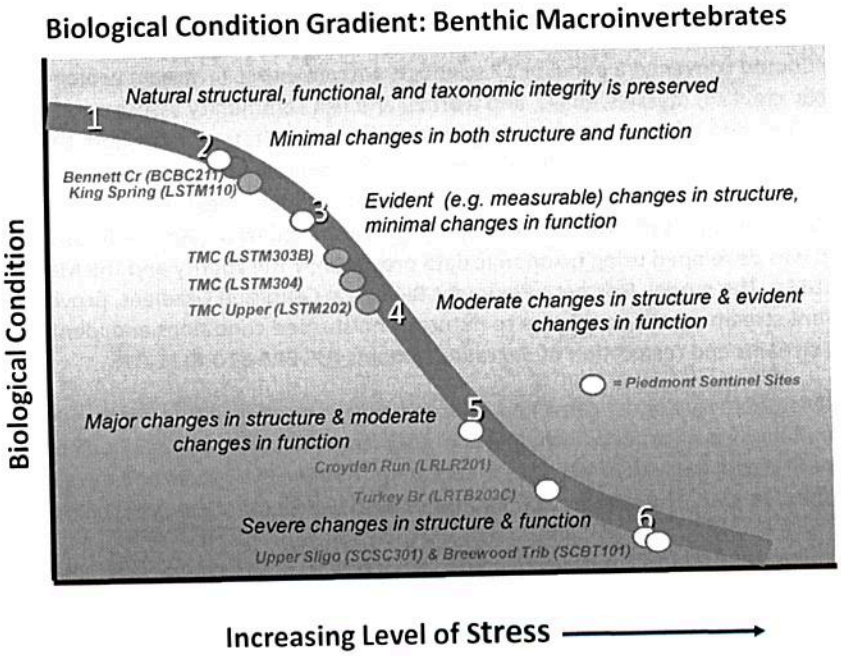

Figure 1. Comparative BCG assessment ratings of macroinvertebrates within Ten Mile Creek (LSTM) sites (blue dots), example Piedmont Sentinel Sites (light blue dots), and similar stream types with increased effects of anthropogenic disturbance (yellow dots).

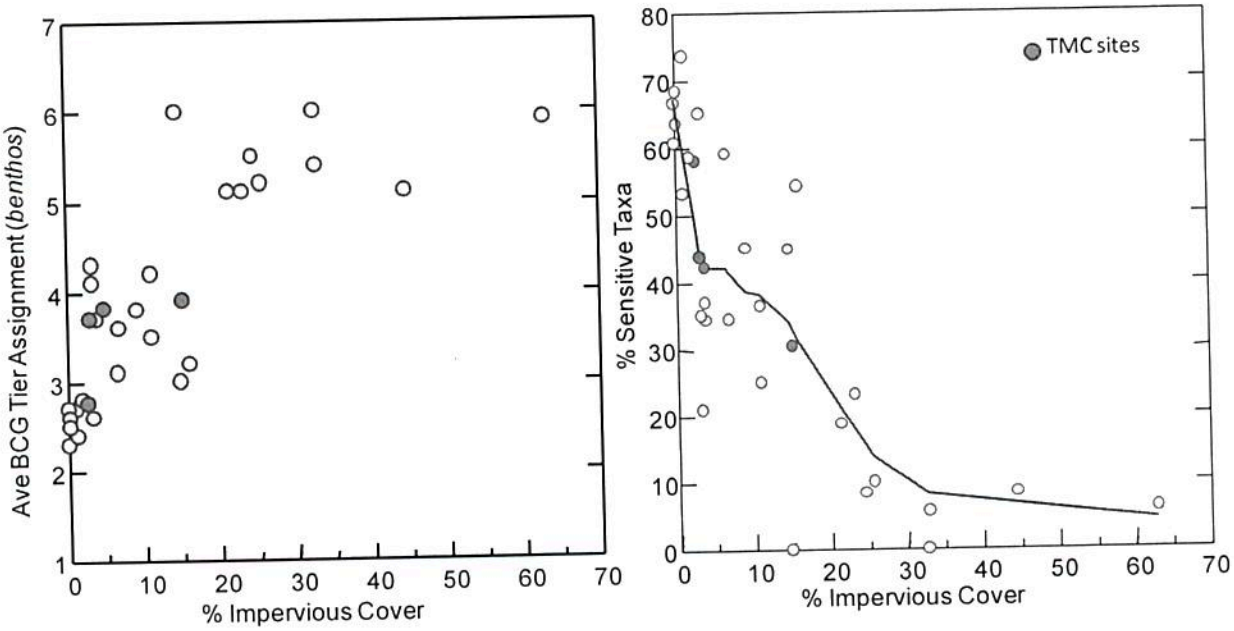

Figure 2. Relationship between average BCG tiers (left) and % Sensitive Taxa (right) versus % impervious cover. This analysis included all sites assessed at the second meeting and included sites from throughout the Piedmont Region in Maryland. Ten Mile Creek (TMC) sites are indicated (red dots).

FAQS

What was the correspondence between the stream sites considered "good quality" and the BCG model?

Sites assigned BCG levels 2 and 3 were considered by the experts as excellent and good quality streams with presence of native and sensitive, sometimes rare, species of benthic macroinvertebrates, fish and/or salamanders. The relative abundance of these species was greatly diminished in sites assessed at BCG level 4. The experts informally characterized these latter sites as "just hanging on" to what may be considered an acceptable level of condition and, depending on type of disturbance and potential for BMPS, good candidates for restoration.

Are there comparable subsheds with similar scores whose land cover, slope and soil conditions are comparable to the TMC?

Maryland Biological Survey (MBSS) Sentinel sites (considered the "best" quality streams in the Piedmont) with similar watershed characteristics scored comparably to King Spring, a TMC site (LSTM110)). One of the Montgomery County sites in a different watershed that scored similarly high was Bennett Creek (BC211), another stream with relatively low development (2 - 3% impervious surface). Bennett Creek lies just to the north of Clarksburg (north of Little Bennett Creek). Although in a different drainage, this forest block is relatively contiguous with the TMC watershed though bisected by the I-270 corridor. The best fish communities among the Montgomery County samples were in the Upper Patuxent River, and the Clarksburg Tributary in 1998 (which has been subsequently degraded by development). Many of the same sensitive benthic invertebrate taxa collected at TMC sites are shared among Sentinel Sites indicating that many streams in the TMC watershed are in very good condition and some segments could be restored with re-introduction of selected species. However, the results of the expert analysis indicate that increasing development in the watershed will predictably result in loss of relative abundance of sensitive taxa (see Figure 2). By way of example, samples taken from three Montgomery County streams before and after development (Before: 1997-98; after: 2011-2012) showed a consistent decline of at least one BCG level (e.g. from Level 3 to 4 or from 4 to 5) over the period, for both invertebrates (3 streams) and for fish (2 streams). Sites rated between BCG levels 3 and 4 were considered by the experts as sites slipping towards degradation but with potential for cost effective restoration.

Did the new information and data analysis at the second meeting changed expert view of the TMC streams rated before?

No. In fact, both the experts who attended the first meeting and those who were new and attended the second meeting assigned TMC sites with nearly identical assessment ratings. The experts were not informed that the sites had been previously assessed. The decision rules drafted at the meeting are based on the expert judgment and the science underlying the decision rules documented. These draft rules will be further tested and peer reviewed to development final model.

What is status of model development?

This past December, the draft narrative decision rules derived at the second expert meeting were independently reviewed and tested by the experts using new data sets. The rules are currently being revised to reflect the expert comments and results will be shared with the expert workgroup. Further work is planned to develop numeric decision rules and algorithm to quantify the model.

Expert Meeting Update: Condition Assessment of Ten Mile Creek Watershed Streams (2/6/14 update)

In March 2013, Montgomery County convened a panel of 17 scientists with expertise in stream ecology, benthic macroinvertebrate (e.g. insects, crayfish, mussels, snails, and worms) and fish community assessments. The experts attending the meeting included scientists from Montgomery County, the State of Maryland, the University of Maryland, University of Maryland at Baltimore County, the Interstate Commission Potomac River Basin and U.S. EPA. The purpose of this meeting was to develop and test a preliminary model for assessment and interpretation of the biological condition of streams within the Ten Mile Creek (TMC) Watershed (Northern Piedmont Ecological Region). A preliminary model was developed using taxonomic data provided by the county and the Maryland Biological Streams Survey (MBSS). The model, Northern Piedmont Biological Condition Gradient, provides a framework for assessing current stream condition relative to natural, undisturbed conditions and identifying goals for protection of high quality streams and restoration of degraded streams (US EPA 810-R-11-01).

On September 24 – 26, 2013 Montgomery County convened a second expert meeting with a larger number of sites for analysis and with an expanded group of experts, including scientists from the states of Virginia, Pennsylvania and Delaware. A more robust, in-depth analysis of the sites is necessary to refine the model and develop an approach for quantification of the model. The preliminary findings of both expert meetings were comparable:

- Four of the 11 TMC monitoring stations were used in the development of the model. One headwater site within the TMC Watershed (King Spring-LSTM110) was identified as a high quality stream (Tier 2-) with taxa comparable to State of Maryland Sentinel Sites (Figure 1). Impervious cover for these sites was at 3% or below. Three other TMC sites with impervious cover ranging between 4 and 11% were rated between Tier 3 and Tier 4 (lower condition). The sites that were approaching BCG level 4 were informally characterized as "just hanging on" to what may be considered an acceptable level of condition. These sites are potential candidates for cost effective restoration.

- Sites within TMC Watershed having higher levels of impervious surface were assessed as lower quality. These more degraded sites had elevated levels of specific conductance, an indicator of urban runoff. However, tributaries (like King Spring) serve to dilute specific conductance in the lower mainstem TMC.

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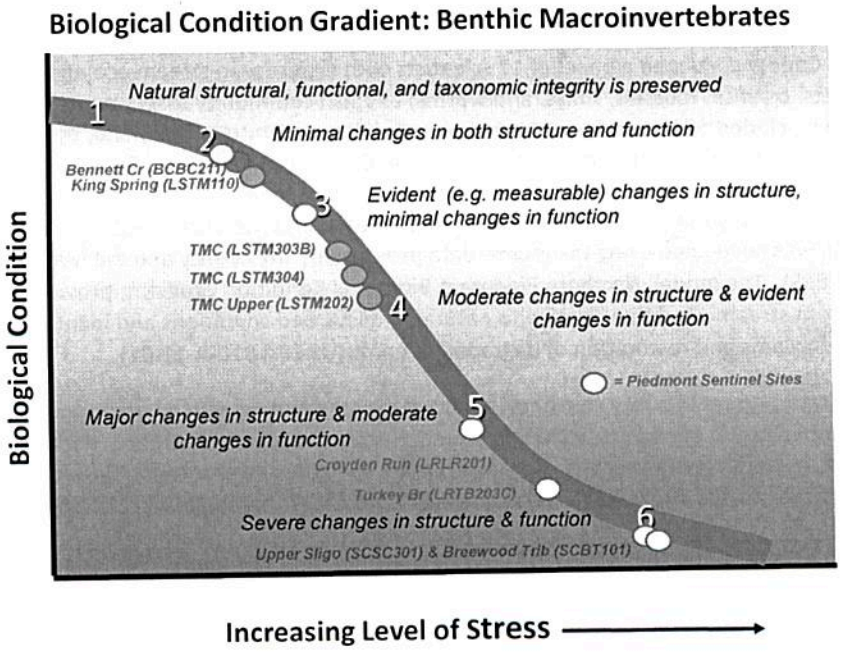

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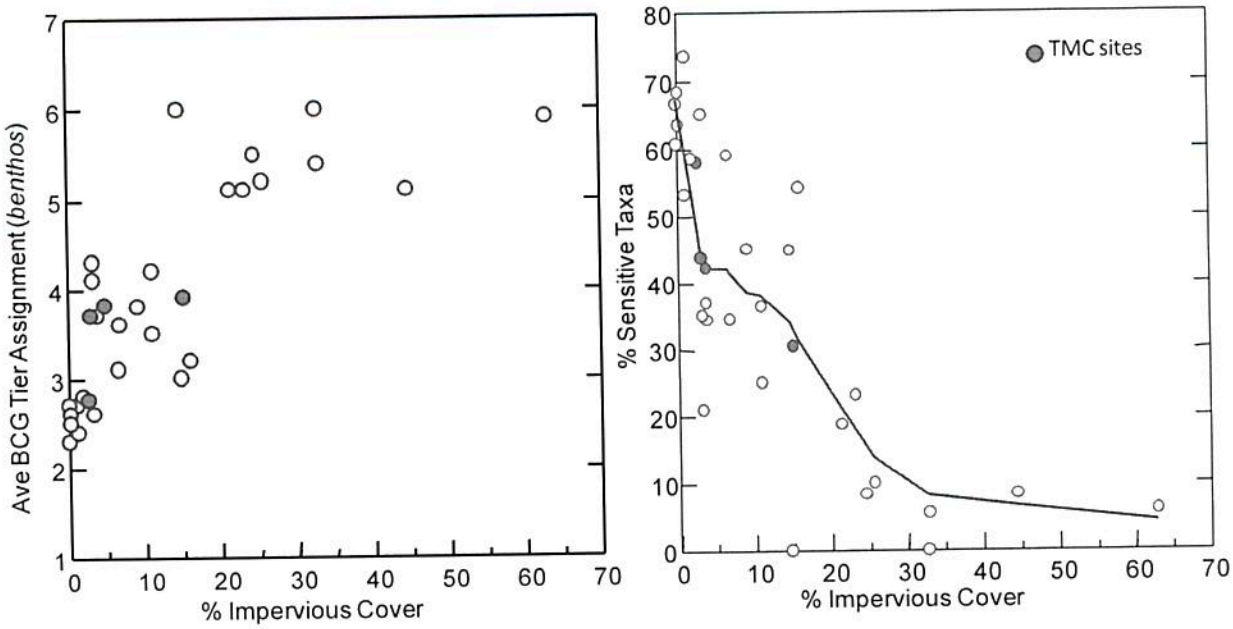

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Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 1:03 PM
To: Jackson, Susank
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary
Attachments: Piedmont_BCG_Expert_Meeting_Update_for_MoCo_Feb_6.pdf

Follow Up Flag: Flag for follow up
Flag Status: Completed

I fixed it anyways!

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Friday, February 07, 2014 12:47 PM
To: Van Ness, Keith
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary

Thanks Keith for changing this into a PDF.

One relatively minor error that I missed, in one of the FAQs (see below). "Development" should be "develop". I do not think though this is an error that has to be corrected. The meaning is clear. Just want to bring to your attention. I am sorry I missed it.

These draft rules will be further tested and peer reviewed to development final model.

Susan

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, February 07, 2014 11:16 AM
To: Jackson, Susank
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary

Hi All
Attached is the pdf of the report. Thank you so much Susan and everyone!

Please note that I made one change – I changed the name of Hoyt Creek (my Directors last name) to its proper name – Croyden Run. It was noticed (ahem) and brought to my attention.
Thanks
Keith

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, February 06, 2014 6:10 PM
To: Van Ness, Keith
Cc: Dolan, Mary; Symborski, Mark; Pond, Greg
Subject: RE: Update on BCG model development_summary

Attached is cleaner titled copy – same text though

Susan

From: Jackson, Susank
Sent: Thursday, February 06, 2014 4:32 PM
To: Van Ness, Keith
Cc: Dolan, Mary; 'Symborski, Mark'; Pond, Greg
Subject: Update on BCG model development_summary

Attached is an update on the BCG model development. An FAQ was included to briefly describe status of effort and next steps. There was also some technical editing done for clarity.

We have received inquiries from Councilman Ehrlich and interested citizens and will refer them to you if they would like a copy of the meeting summary. We will be glad to answer technical questions on the BCG model and calibration effort.

We look forward to working with the county and the expert workgroup to develop and quantify the BCG model for streams in the Northern Piedmont Ecoregion.

Susan Jackson
US EPA biocriteria program

Greg Pond
US EPA Region 3

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Monday, February 10, 2014 2:24 PM
To: Matthew Baker; Jackson, Susank
Cc: Dolan, Mary; Symborski, Mark
Subject: RE: FW: Attendance at Tuesday Ten Mile Creek Meeting

Thanks Matt! And Susan - you are not overstepping any bounds that I know of! I am pretty confident that Matt will be asked to come down tomorrow
- his expertise and ability to connect with folks is greatly appreciated! Susan - I know the BCG will come up as well. I will try to explain how we wanted to understand Ten Mile Creek in the context of other piedmont streams - but now I do not want to overstep my bounds. I will cc you on an email shortly about the BCG and you can see if I can represent our work together or not.

Mary - do you have the letter from Loiderman that recommended we do the BCG? I could really use that!

Thanks
Keith

-----Original Message-----
From: Matthew Baker [mailto:mbaker@umbc.edu]
Sent: Monday, February 10, 2014 2:18 PM
To: Jackson, Susank
Cc: Van Ness, Keith; Dolan, Mary; Symborski, Mark
Subject: Re: FW: Attendance at Tuesday Ten Mile Creek Meeting

Hi All

Susan is right, I am buried today. I have a short window and wanted to let you know that I am supposed to speak with Marlene Michaelson later this afternoon. My understanding is that it is likely, but not definite that I will be asked to come back down tomorrow. I thought it might be helpful to ask some of the other scientists who have been working on the Clarksburg SPA to talk about their recently published results and to share their perspectives if needed, and I was going to suggest it to Marlene, but I wasn't sure whether anyone was available.

Obviously it is not my place to decide who comes in, I am just responding to a flurry of communication from the council over the weekend. I thought that, given Taylor and Dianna's direct experience with some of the questions currently being asked by the council, their observations might be relevant.

Best,

Matt

On 2/10/14 2:04 PM, Jackson, Susank wrote:
> Keith, Mary and/or Mark,
>
> I hope I am not overstepping my bounds, but there has been some very

good discussion and sharing of information between Matthew Baker and Taylor Jarnagin (EPA ORD). Matthew has been asked to further testify for the council at the hearing tomorrow --- and he has spoken with Taylor about either accompanying him or, if possible, testifying remotely.
>
> I am not sure if either of them have been in touch with you, I had
emailed Matt earlier today and asked him if I could assist in anyway. I have not heard back and he may be buried with teaching and other responsibilities today. I would at least give you a heads up so if he is able to contact you about possibilities to include Taylor, it would not be too late to set up something to include Taylor. Please keep in mind that Matthew may have also spoken directly with whomever invited him to further testify.
>
> I apologize if I am being redundant if Matthew already has been
inquiries.
>
> Susan Jackson
>
> -----Original Message-----
> From: Jarnagin, Taylor
> Sent: Monday, February 10, 2014 12:07 PM
> To: Matthew Baker; Hogan, Dianna; Loperfido, John
> Cc: Jackson, Susank; Baker, Steven
> Subject: Attendance at Tuesday Ten Mile Creek Meeting - RE: Reply to
> your inquiry re Ten Mile Creek
>
> Hi Matt,
>
> I will not be able to attend Tuesday's meeting (Montgomery County
Council, Clarksburg/Ten Mile Creek Meeting, February 11 2014:< http://www.mymcmedia.org/event/council-committee-meeting-phedte-3/>
??). This would be the "02/11/2014 1:45 PM - PHED/T&E Committee - 3rd floor Council Hearing Room":
> <
http://montgomerycountymd.granicus.com/GeneratedAgendaViewer.php?view_id
=6&event_id=1657>?
>
> I will be working Flexiplace from home and could theoretically connect
via telephone but don't see any teleconferencing information.
>
> I have Cc'd Dianna and JV - It is possible they might be able to
attend?
>
> Taylor
>
> S. Taylor Jarnagin, Ph.D.
> Research Ecologist
> EPA Landscape Ecology Branch
> Environmental Sciences Division
> USEPA/ORD National Exposure Research Laboratory Mail Drop E243-05
> 109 T.W. Alexander Drive
> Research Triangle Park, NC 27711
>
> E-mail: jarnagin.taylor@epa.gov
>
> Work Office Telephone (M-W-F): 919-541-1987 Work Office Fax (M-W-F):

> 919-541-0864
>
> Web Site:
> < http://www.epa.gov/nerlesd1/land-sci/staff/jarnagin.htm>
>
> Main Research Project:
> "Collaborative Research: Streamflow, Urban Riparian Zones, BMPs, and Impervious Surfaces":
> < http://www.epa.gov/nerlesd1/land-sci/clarksburg01-05.htm>
>
>
> -----Original Message-----
> From: Matthew Baker [mailto:mbaker@umbc.edu]
> Sent: Saturday, February 08, 2014 10:42 AM
> To: Jarnagin, Taylor
> Cc: Jackson, Susank; Baker, Steven
> Subject: Re: Reply to your inquiry re Ten Mile Creek
>
> Hi Taylor and Steven,
>
> You are correct that the Council is thinking that they can minimize impacts by shift impervious cover percentages around and trying to reach a magic number. They are not hearing me well when I tell them that despite the space-for-time evidence showing associations between biological condition and impervious cover at particular levels, imperviousness is really a strong indicator of many processes that contribute to the Urban Stream Syndrome, and that temporal evidence suggest degradation occurs (1) during construction (~pulse disturbance) and (2) episodically and progressively (~ramp and press disturbances) once critical levels of development are achieved (TMC has already reached or surpassed these levels). I have also mentioned that despite the fact that exceptional construction and stormwater BMPs were employed in the Little Seneca SPA, they did not prevent loss of biotic integrity (FYI, I made a point of sending them Hogan et al. 2014 JAWRA and mentioned this to Dianna).
>
> I have been asked to be available for further testimony on Tuesday. If you are available, I can suggest that your presence would be helpful as well. I personally feel that when we present a united front from independent investigations in the area, we make a stronger case both for the Council and the stakeholders (watching closely on TV).
>
> Best,
> Matt (UMBC)
>
>
>
> On 2/8/14 9:56 AM, Jackson, Susank wrote:
>> Thank you, Taylor.
>>
>> I have cced Matt Baker at UMBC - he is the scientist that has been working with us on the BCG model development for Ten Mile Creek (Northern Piedmont BCG).
>>
>> I am glad you cced Steven Matt Baker - it is best to keep all informed and gain insight from you and Steve based on your work.
>>
>> Matt Baker (UMBC) has been asked to testify (a second time) before the council next week. Based on emails he has sent me, we are all on the same page re degradation that will occur.
>>

>> Susan
>>
>> _____
>> From: Jarnagin, Taylor
>> Sent: Friday, February 07, 2014 5:01 PM
>> To: Jackson, Susank
>> Cc: Baker, Steven
>> Subject: RE: Reply to your inquiry re Ten Mile Creek
>>
>> Hi Susan,
>>
>> I am assuming you are referring to Steven Matt Baker of USGS when you say "Matt Baker" and not the professor at UMBC. 'USGS Matt' [smbaker@usgs.gov] had participated in the Ten Mile Creek Watershed master plan reviewer activities about a year ago. Therefore I have Cc'd him. If I am wrong, please excuse me and please delete this e-mail.
>>
>> Please see attached:
>> Appendix 2 Scenario Descriptions Revised p3 wsheds image.pdf
>> Ten Mile Creek near Town Center development areas.pdf
>>
>> It seems to me that there are two areas the developers desperately want to develop:
>> 1) the area near the Town Center (blue circle) straddling I-270, bounded by Frederick Road, Clarksburg Road, and Comus Road; and
>> 2) the area straddling Clarksburg Road and Old Baltimore Road (red circle) in the northern portion of Cabin Branch, currently under development.
>>
>> It also seems to me that The County Council wants to allow development and believe that if the overall level of imperviousness is kept to a small enough 'magic amount', than that proposed development will only have a limited impact.
>>
>> In my opinion, the level of development proposed in these areas would have a major negative impact on the upper portions of the following subwatersheds:
>> LSTM201
>> LSTM206
>> LSTM202
>> LSTM110
>> LSTM111
>>
>> I am not certain exactly where the proposed parcels (i.e.: "Pulte") are located but I assume the development will occur primarily on the ridgelines and the lowers riparian areas will be left largely intact. I think that just the construction activity alone will cause a major reduction in watershed quality, based on what we have seen in T104. I also assume that with sufficient effort and maintenance, substantial recover could be seen in the streams following the conversion of the BMPs to stormwater control. However, I assume that Fair or Good would be the best final watershed condition that could be expected. It seems to me that the development will be centered upon the upper reaches of the subwatersheds which I feel are the areas most sensitive to disturbance.
>>
>> In my opinion, Ten Mile Creek offers an unfortunate juxtaposition of sensitivity and where development pressure coexist.
>>
>> Taylor

>>
>> S. Taylor Jarnagin, Ph.D.
>> Research Ecologist
>> EPA Landscape Ecology Branch
>> Environmental Sciences Division
>> USEPA/ORD National Exposure Research Laboratory Mail Drop E243-05
>> 109 T.W. Alexander Drive
>> Research Triangle Park, NC 27711
>>
>> E-mail: jarnagin.taylor@epa.gov
>>
>> Work Office Telephone (M-W-F): 919-541-1987 Work Office Fax (M-W-F):
>> 919-541-0864
>>
>> Web Site:
>> < http://www.epa.gov/nerlesd1/land-sci/staff/jarnagin.htm>
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>> Main Research Project:
>> "Collaborative Research: Streamflow, Urban Riparian Zones, BMPs,
and Impervious Surfaces":
>> < http://www.epa.gov/nerlesd1/land-sci/clarksburg01-05.htm>
>>
>>
>

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Monday, February 10, 2014 2:28 PM
To: Jackson, Susank; Pond, Greg; Gerritsen, Jeroen
Subject: RE: status of revised BCG decision rules and "desktop" test by experts?

Thanks Susan – tomorrow will be a very important day!

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Monday, February 10, 2014 2:27 PM
To: Pond, Greg; Gerritsen, Jeroen
Cc: Van Ness, Keith
Subject: status of revised BCG decision rules and "desktop" test by experts?

Please let me know the status of the desktop test of the draft decision rules and when would be a good time to schedule a webinar with the experts.

Re LSTM 202 (with % imperviousness at 11%) rated at BCG level between 3 and 4, just extrapolating from the graph in the meeting summary, it looks like a 4+. Sites 303b and 304 (with imperviousness at 4%), rated at what looks like a 3-.

I look at the maps Taylor sent and am wondering if 202 was in relatively good shape given the % imperviousness because it looks like the cleared area is a fair distance from the stream sampling site and buffered by the intervening wooded area? Would assemblages at site 202 still be rated as a 4+ site given the updated and revised rules?

Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Monday, February 10, 2014 2:42 PM
To: Jackson, Susank; Pond, Greg; Gerritsen, Jeroen
Subject: RE: status of revised BCG decision rules and "desktop" test by experts?

Thanks – will do!

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Monday, February 10, 2014 2:35 PM
To: Van Ness, Keith; Pond, Greg; Gerritsen, Jeroen
Subject: RE: status of revised BCG decision rules and "desktop" test by experts?

If it is of any help, let them know we intend to use the Piedmont Stream BCG as a case study in our technical document on development and application of the BCG model. In a very positive way, we are looking at how the BCG is used to help inform decisionmaking so what is at stake is as clearly communicated as possible. The council may very well choose degradation of these high quality streams over protection – but at least the decision will be transparent to the public.

Susan Jackson

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Susan

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, March 05, 2014 2:11 PM
To: Jackson, Susank
Cc: Pond, Greg; Gerritsen, Jeroen; Jen.Stamp@tetratech.com; Reynolds, Louis
Subject: Ten Mile Creek - yesterday

Hi Susan et al. :

Yesterdays 'straw vote' on Ten Mile Creek was unanimous – one of the deciding factor was the BCG report you, Greg and Jeroen authored and how you described Ten Mile Creek.

http://www.washingtonpost.com/local/montgomery-council-tentatively-agrees-to-tighter-building-limits-in-clarksburg-watershed/2014/03/04/e7021df4-a3a3-11e3-84d4-e59b1709222c_story.html

Matt is mentioned in this article, and you were also credited during the Council session with helping the Council to come to this unanimous (although not yet binding) vote – based on science and the presentation of the best science available. The final vote will be in about 3 weeks – we were asked to recommend specific actions that need to be taken (both language in the masterplan as well as in regulation) to put the teeth in the recommendations.

Thank **you all** very much! You all put in so much work to make this happen – 6% imperviousness cap for the property adjoining LSTM110 – is huge for this County. It is still high but is much better than the 12% originally proposed and now we can develop specific language to make sure nothing is left out in the details.

Thanks again
Keith

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, March 26, 2014 12:01 PM
To: Jackson, Susank
Cc: Michaelson, Marlene
Subject: RE: Resolution Adopting the Ten Mile Creek Amendment

Hi Susan

Well – they may not be up yet because the resolution is draft at this point.

Marlene – can you help with this question from Susan?
Keith

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Wednesday, March 26, 2014 11:58 AM
To: Van Ness, Keith
Subject: RE: Resolution Adopting the Ten Mile Creek Amendment

Hi Keith,

Thanks for sending this.

I am wandering around the county council website trying to find the appendices that are referred to in the draft resolution. Can you point me to them? The link is probably right before my eyes but I am missing it.

Susan

From: Van Ness, Keith [mailto:Keith.VanNess@montgomerycountymd.gov]
Sent: Tuesday, March 25, 2014 3:01 PM
To: Pond, Greg; Jackson, Susank; Gerritsen, Jeroen; Jen.Stamp@tetratech.com; Stranko, Scott; Baker, Steven; Doheny, Edward; Bolton, David; Matthew Baker; Matthew Stover -MDE-; Dianna Hogan; Loperfido, John; Jarnagin, Taylor
Cc: Curtis, Meosotis; Green, William; Mack, Kenny; Rockman, Mark; Naibert, Eric; Jordahl, Dave; St. John, Jennifer
Subject: FW: Resolution Adopting the Ten Mile Creek Amendment

Hi All:

I wanted to thank you for all your hard work spent over the past several years. You all significantly contributed to the development of this master plan amendment. Colleagues from the U.S. EPA told me years ago that science is best used in decision making when it is timely, understandable and noticed. This time you all were right there when the science was needed. Take a read of the highlighted link – I hope you find it as rewarding as I did to see how decision makers understood what the science was saying.
Thanks
Keith

From: Michaelson, Marlene
Sent: Tuesday, March 25, 2014 2:45 PM
To: Van Ness, Keith
Subject: RE: Resolution Adopting the Ten Mile Creek Amendment

Thanks for all your work on this as well.

Feel free to share the resolution with anyone who is interested.

Marlene

From: Van Ness, Keith
Sent: Tuesday, March 25, 2014 2:40 PM
To: Michaelson, Marlene
Subject: RE: Resolution Adopting the Ten Mile Creek Amendment

Thanks Marlene for all your hard work, time and weekends that were spent on this! Who knew what would happen that were around 20 years ago. I never would have thought this would happen. May I share the link with my staff – I think they would like to see how their work was used.
Keith

From: Michaelson, Marlene
Sent: Tuesday, March 25, 2014 2:37 PM
Subject: Resolution Adopting the Ten Mile Creek Amendment

The Council is scheduled to vote on the Ten Mile Creek Amendment to the Clarksburg Master Plan on April 1. A DRAFT resolution detailing the Council's changes to the Plan is now available for review on the Council website at http://www.montgomerycountymd.gov/council/ (see box entitled Council Headlines).
Marlene Michaelson
Senior Legislative Analyst

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Monday, March 31, 2014 9:37 AM
To: Jackson, Susank; Pond, Greg; Stranko, Scott; Reynolds, Louis; msoutherland@Versar.com; Jcummins@ICPRB.org; Becker, Andrew; mstover@mde.state.md.us; cluckett@mde.state.md.us; Mack, Kenny; cpoukish@mde.state.md.us; Friedman, Ellen; St. John, Jennifer; aleslie@umd.edu; Dziepak, Neal; cmswan@umbc.edu; agriggs@icprb.org; Alexander, Laurie; Passmore, Margaret; David.Sigrist@montgomeryparks.org; Cole, Jai; Naibert, Eric; Jordahl, Dave; BORSUK, FRANK; Gillespie, Joy; rraesly@frostburg.edu; rhilderbrand@al.umces.edu; Gougeon, Charles; Jason.Hill@deq.virginia.gov; Kashiwagi, Michael T.; aeverett@pa.gov; efilip@pa.gov; Jeanne.Classen@deq.virginia.gov; Warren.Smigo@deq.virginia.gov; William.Shanabruch@deq.virginia.gov; Ellen.Dickey@state.de.us; Kilian, Jay; Matthew Baker
Cc: Jeroen.Gerritsen@tetratech.com; Shofar, Steven; Curtis, Meosotis; Dolan, Mary; Symborski, Mark; Forren, John; Boward, Dan
Subject: Invitation to a Webinar to refine the Biological Condition Gradient for Piedmont Streams

Good morning everyone!

Please hold April 29th for a webinar to refine the BCG for Piedmont streams. Your participation in this exercise will help us further refine the draft decision rules for clarity and consistency. We will be sending out the details and the call-in number at a later date.

We need to refine some of the draft decision-level rules. A short webinar is needed to do that as a group. The benthic model is about 85% correct in matching the panel, and we need to improve its accuracy. The fish model is still being revised and will also be worked on during the webinar. We will need several hours each to refine the draft benthic and fish decision rules and arrive at a group consensus.

Thank you all

Keith Van Ness
Senior Water Quality Specialist
Montgomery County Department of Environmental Protection
240-777-7726

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Tuesday, April 01, 2014 2:20 PM
To: Matthew Baker; Jackson, Susank; Pond, Greg; Reynolds, Louis; Jeroen.Gerritsen@tetratech.com; Jen.Stamp@tetratech.com; Stranko, Scott; Bolton, David; Dianna Hogan; Loperfido, John; Jarnagin, Taylor; Doheny, Edward; Baker, Steven; Dillow, Jonathan; Matthew Stover -MDE-
Subject: Ten Mile Creel Limited Master Plan Amendment

Please read this press release! Your contributions for providing the science that was timely, understandable and acceptable was recognized and acknowledged by the County Council during today's session as being key for the decision to provide as much environmental protection as they could do in the fragile Ten Mile Creek watershed! We have never set an imperviousness cap at 6% before!
http://www6.montgomerycountymd.gov/Apps/Council/PressRelease/PR_detailsnew.asp?PrID=13543

Thank you all! I think we finally got one right.

All the best
Keith

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Thursday, May 08, 2014 3:17 PM
To: Jackson, Susank; Pond, Greg; Reynolds, Louis; Gerritsen, Jeroen
Subject: RE: Tasks for ongoing work

We are working with Jeroen and Jen as I write this!

From: Jackson, Susank [mailto:Jackson.Susank@epa.gov]
Sent: Thursday, May 08, 2014 2:50 PM
To: Van Ness, Keith; Pond, Greg; Reynolds, Louis; Gerritsen, Jeroen
Subject: FW: Tasks for ongoing work

Keith, Greg and Louis, I would like to complete the Montgomery County BCG over next 6 months. Please work with Jeroen to determine what needs to be done and schedule. I threw out suggestion for a journal article just as an idea – I certainly would like to highlight MoCo as a case example but where, when and how is up for discussion.

The other perspective I would like to hear from Greg and Louis is any thoughts on how to test the BCG for adjacent counties and/or states to broaden or test applicability. This seems particularly important given the involvement of other state scientists.

See task #1a below.

Susan

From: Jackson, Susank
Sent: Thursday, May 08, 2014 2:43 PM
To: Gerritsen, Jeroen
Cc: 'Emily Shumchenia'; 'Don Charles (charles@ansp.org)'; 'Dennis McIntyre'
Subject: Tasks for ongoing work

Hello Jeroen, Per our quick discussion yesterday I am developing tasks for work to be done over next 6 months – contract vehicle is not of concern at this time. I would like to discuss with you the subtasks under #1 (streams) including input from both you and Don re subtask #1c. As you see, level of detail is not extensive. I talked this morning with Emily about #2a (estuaries) and am presuming that #2b (Coral) will be able to be supported through the NCEA contract.

Please take a look and provide feedback asap.

FY 2014

1. BCG and biocriteria development

a) Montgomery County BCG (Northern Piedmont streams for fish, invertebrates and amphibians): quantitative model (decision rules, algorithm).

Applications: Public communication

Inform county council re adjustment to 1994 Clarksburg Plan

Update county biocriteria

Status: Expert panel refining quantitative decision rules

Next Steps: Test and peer review quantitative decision rules, develop algorithm program and upload

Journal article and write up as case study

Cost: Discuss with Keith, Greg and Jeroen this week

b) Alabama BCG for high gradient streams (Northern Alabama streams for fish and invertebrates)

Application: Attainment decisions (303d) (pre-biocriteria step)

Condition Assessments

Identify high quality streams (partner with OWOW's HWP)

Status: Expert panel refining quantitative decision rules and beta testing

Next Steps: Peer review quantitative decision rules, develop algorithm program and upload

Write up as case study

Cost: Discuss with Lisa and Jeroen this week

c) New Jersey BCG and biocriteria for streams (diatom)

Application: Inform nutrient criteria development

Integrate with biocriteria for fish and invertebrates to conduct condition assessments

Status: Expert panel May 5 and 6 (talking with Don Charles later today re outcome and next steps)

Next Steps: TBD based upon discussion with Don Charles and Jeroen

Cost: " "

2) Application of BCG and biocriteria to other waterbody types

a) Estuarine BCG and biocriteria (Shumchenia, ORD/Giancarlo, Pelletier)

Applications: Define Ecological Management Goals and Establish Quantitative Thresholds

Public Communication re status of resource

Status: Draft guidelines on BCG attributes for connectivity and function (in process)

Recommendations on NEP candidates for pilot (in process)

Next Steps: Discuss with Emily this week

Cost: " "

b) Coral Reef BCG and biocriteria (ORD/Bradley, Santavvy, Fisher)

Applications: Define Ecological Management Goals and Establish Quantitative Thresholds

Public Communication re status of resource

Tool in Decision Science "Toolkit"

Status: Preliminary numeric decision rules being drafted (fish and coral)

Next Steps: Develop and test numeric decision rules

Cost: NCEA contract, workplan in place

Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Friday, May 30, 2014 1:31 PM
To: Jen.Stamp@tetratech.com; Jackson, Susank; Pond, Greg
Cc: Gerritsen, Jeroen
Subject: RE: Northern Piedmont BCG report

Thank you all very much! Wahooooo!

From: Stamp, Jen [mailto:Jen.Stamp@tetratech.com]
Sent: Fri 5/30/2014 11:50 AM
To: Jackson.Susank@epa.gov; Pond, Greg (Pond.Greg@epa.gov); Van Ness, Keith
Cc: Gerritsen, Jeroen
Subject: Northern Piedmont BCG report

Hi Susan, Greg and Keith,

Attached is the draft Northern Piedmont BCG report. The electronic BCG model worksheets will follow shortly.

Please let me know if you have any questions about the attached files.

Thank you,

Jen

Jen Stamp | Aquatic Ecologist

Voice: 802.229.4508 (office) 802.839.8603 (cell)| Fax: 802.223.6551 Jen.Stamp@tetratech.com

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Jackson, Susank

From: Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov>
Sent: Wednesday, June 11, 2014 9:49 AM
To: Gerritsen, Jeroen; Pond, Greg; Jen.Stamp@tetratech.com; Jackson, Susank
Subject: RE: supplemental files on the Northern Piedmont BCG

No show stoppers here! I am not a show stopper anyways. I am still reviewing but very few edits at this point.

From: Gerritsen, Jeroen [mailto:Jeroen.Gerritsen@tetratech.com]
Sent: Wednesday, June 11, 2014 9:38 AM
To: Pond, Greg; Stamp, Jen; Jackson, Susank; Van Ness, Keith
Subject: RE: supplemental files on the Northern Piedmont BCG

My feeling is that if you, Susan and Keith have edits but saw no show stoppers, then go ahead and send to the panel if it's OK with Susan. We can't officially work on it just yet anyway.

Jeroen Gerritsen
Tetra Tech, Inc.
400 Red Brook Blvd., Suite 200
Owings Mills, MD 21117
Direct: (410) 902-3149
Office: (410) 356-8993

From: Pond, Greg [mailto:Pond.Greg@epa.gov]
Sent: Tuesday, June 10, 2014 10:11 PM
To: Stamp, Jen; Jackson, Susank; Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov> (Keith.VanNess@montgomerycountymd.gov)
Cc: Gerritsen, Jeroen
Subject: RE: supplemental files on the Northern Piedmont BCG

Jen and Jeroen, this is great work putting it all together! I'm glad you included Lei's analysis and the worksheet instructions. I am attaching 3 files with some edits/comments. I still need time to re-look at the other appendices and supplements but on first quick review, they look good.

We can discuss these comments by phone if you like. I am available most of this week and Thurs-Friday next week. I am guessing that this will go out for review by the panelists soon? I know Lou and Frank from our lab will want to review the fish sections.

Greg

Greg Pond
U.S. EPA Region III
Office of Monitoring and Assessment
Freshwater Biology Laboratory
Wheeling, WV 26003
(304) 234-0243

From: Stamp, Jen [mailto:Jen.Stamp@tetratech.com]
Sent: Friday, May 30, 2014 4:24 PM
To: Jackson, Susank; Pond, Greg; Van Ness, Keith <Keith.VanNess@montgomerycountymd.gov> (Keith.VanNess@montgomerycountymd.gov)
Cc: Gerritsen, Jeroen
Subject: supplemental files on the Northern Piedmont BCG

Hi Susan, Greg and Keith,

I wanted to send along some additional files for the Northern Piedmont BCG project. I am calling these 'supplemental' because I'm not sure there is a place for them in the report.

In the Word document, I describe two comparative analyses that we did. First, we examined how the BCG model outputs compared to IBI scores provided by MO DEP and MDDNR (Keith, thanks again for compiling the IBI information for me). Secondly, there were some samples that were assessed by both the bug and fish groups, and we compared the BCG level assignments at these overlapping sites.

In the attached Excel file, I provided automated BCG model outputs for all of the samples in my database.

As mentioned earlier, we welcome your feedback on all of these files.

Thanks and have a great weekend!

Jen

Jen Stamp | Aquatic Ecologist
Voice: 802.229.4508 (office) 802.839.8603 (cell)| Fax: 802.223.6551 Jen.Stamp@tetratech.com

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